

Morning Session #1: Costs of Housing for Lower Income Families

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*Arizona Department of Housing Workshop
January 21, 2010*

***“Housing Elements of General and Other Jurisdictional Plans:
Developing Policy for Sustainable Affordable Housing ”***



Summary:

In order for jurisdictions to plan a creative and effective strategy for affordable housing, we must understand the “whole” cost of housing.



Summary:

This “whole” cost includes components not normally considered housing costs: transportation and community costs of energy and water.



**1. In the traditional approach, we
calculated the gap between construction
cost and ability to pay and subsidized
the difference for qualifying families.**



2. Adding more complexity in our approach, we are understanding that there are many elements of housing cost beside the cost of construction and these may give us a better opportunity to close the affordability gap.



Construction plus

- ***Land development***
- ***Real estate***
- ***Banking***
- ***Ownership***

3. As we plan for the future, we will need to incorporate the “whole” cost of housing into our community planning, including:

- transportation re: services/employment**
- energy/water and infrastructure**

Simplify your life, Share our cars.



So let's look at some facts.

1. Traditional approach, Construction cost



Minimum Construction Cost

(1170 sf, 3 bedroom)

Site work	\$ 3,522	4.1%
Foundation/floors	\$ 7,834	9.2%
Exterior walls	\$10,684	14.2%
Interior framing	\$ 8,463	9.9%
Roof framing & roofing	\$ 6,867	8.1%
Cabinets and casework	\$ 2,727	3.2%
Finishes	\$11,799	14.1%
Insulation and sealants	\$ 2,225	2.6%
Doors/windows/hardware	\$ 6,770	8.0%
Specialties/equipment	\$ 2,514	2.9%
Mechanical	\$ 8,344	9.9%
Plumbing	\$ 6,826	8.1%
Electrical	\$ 4,876	5.7%
Subtotal Construction	\$83,451	100.0%



(The calculation for each sub-contractors includes sub-contractor profit and overhead.
Approximately 88% of the costs above are material and labor, 12% are profit and overhead)

Minimum Construction Cost **(1170 sf, 3 bedroom) (continued)**

• Subtotal Construction	\$ 83,451	78.7%
• General Conditions	\$ 7,531	7.1%
• Overhead @ 5%	\$ 4,549	4.3%
• Profit @ 6%	\$ 5,732	5.4%
• <u>Tax @ 4.74%</u>	<u>\$ 4,799</u>	<u>4.5%</u>

Grand-total Construction \$106,062

Lot Development Cost \$ 25,877

Sales price: \$131,939

Standard Procedure:

Benchmark affordability is defined as:

$$\frac{(\text{Rent / mortgage} + \text{Utilities})}{\text{Gross Income}} < 30\%$$

Our sales price = \$132,000

90% Mortgage (30 yr @ 7.25%) = \$ 812

Utility/taxes/insurance = \$ 352

Monthly cost to owner = \$ 1,164

at 30% rule, income can be = \$46,560

Pima County \$51,680 = +/- median income
80% median = \$ 38,780

\$38,780 x .3 / 12 mos. affords/mo. = \$ 969

Utility/taxes/insurance = \$ 352

Available to pay Mortgage = \$ 617

Mortgage (90% for 30 yr @ 7.25%) = \$ 90,500

Sales price must be /.9 = \$100,555

Minimum house = \$132,000

Subsidy (or reduce cost) \$ 31,444

So how do we reduce the cost of construction by almost \$31,444?

We can't.

Site work	\$ 3,522	4.1%
Foundation/floors	\$ 7,834	9.2%
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Some surprising conclusions about housing cost



It is not a design problem;
housing cost will not be
significantly lowered by
creative design.



It is not a labor problem; it cannot be solved by reducing the wages of the people that build housing nor solved by sweat equity.



It is not a technology problem; it will not be solved in the near future by new materials or products.



It is not a quality problem. It cannot be solved by developing products less durable or safe. Bad housing should not be the alternative to homelessness.

Solving the housing problem will be a combination of putting more resources into the hands of housing consumers (higher wages and/or more subsidy) and by systematically attacking housing cost at its *most vulnerable points*

To attack housing costs at its most vulnerable points, one needs to understand with a great degree of sophistication, all of the aspects of housing cost

2. More comprehensive approach,

Construction plus

- *Land development*
- *Real estate*
- *Banking*
- *Ownership*

Minimum Housing Costs **(a very low end example)**

- **Construction**
- **Land development**
- **Real estate**
- **Banking**
- **Ownership**

Minimum Construction Cost

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Grand-total Construction \$106,062

Lot Development Cost \$ 25,877

Sales price: \$131,939

Land Development Costs (50 lot subdivision)



• Raw land purchase cost	\$13,200/lot
• Rezoning cost	\$ 1,856/lot
• Construction/engineering	\$ 9,421/lot
• <u>Permits and review</u>	<u>\$ 1,400/lot</u>
Total	\$25,877/lot

Real Estate (\$132,000 home)

- **Closing Costs**

Loan origination fee	\$ 875
Appraisal fee	\$ 325
Credit report	\$ 65
Tax service fee	\$ 85
Underwriting fee	\$ 325
Closing fee	\$ 205
Documentation fee	\$ 115
Title Insurance	\$ 255
Recording fee	\$ 25
Flood certification	\$ 9
Total	\$2284



Real Estate (\$132,000 home)

- **Prepaid Escrow**

Interim interest	\$ 190
Hazard insurance	\$ 425
<u>Property tax impounds</u>	<u>\$ 345</u>
Total	\$ 960

- **Total closing/escrow** **\$3244**

(When used,

Real Estate Commission @ 6% \$7920)

Banking (\$118,800 mortgage, 30 year)



<u>Interest Rate</u>	<u>Monthly Payment</u>	<u>Total Paid</u>	<u>Factor</u>
• 0.0%	\$ 330.	\$118,800	1.00
• 1.0%	\$ 382.	\$137,520	1.16
• 2.0%	\$ 439.	\$158,040	1.33
• 3.0%	\$ 501.	\$180,360	1.52
• 4.0%	\$ 567.	\$204,120	1.72
• 5.0%	\$ 637.	\$229,320	1.93
• 6.0%	\$ 712.	\$256,320	2.15
• 7.0%	\$ 790.	\$284,400	2.39
• 8.0%	\$ 871.	\$313,560	2.64
• 9.0%	\$ 956.	\$344,160	2.90
• 10.0%	\$1042.	\$375,120	3.16

Banking (\$118,800 mortgage, 20 year)



Interest Rate	Monthly Payment	Total Paid	Factor
• 0.0%	\$ 495.	\$118,800	1.00
• 1.0%	\$ 546.	\$131,040	1.10
• 2.0%	\$ 601.	\$144,240	1.21
• 3.0%	\$ 658.	\$157,920	1.33
• 4.0%	\$ 720.	\$172,800	1.45
• 5.0%	\$ 784.	\$188,160	1.59
• 6.0%	\$ 851.	\$204,240	1.73
• 7.0%	\$ 921.	\$221,040	1.87
• 8.0%	\$ 993.	\$238,320	2.01
• 9.0%	\$1069.	\$256,560	2.16
• 10.0%	\$1146.	\$275,040	2.32

Ownership (\$132,000 house/month)

• Gas	\$ 45
• Electric	\$ 85
• Telephone (land line, no cell)	\$ 52
• No cable, no internet	\$ 0
• Water	\$ 44
• Insurance	\$ 48
• Taxes	\$ 98
• Replacement reserve	\$100
• <u>Repairs and maintenance</u>	<u>\$ 80</u>
Total Monthly Ownership Cost	\$552

Conclusions

1. The monthly payment of a housing consumer is going a lot of other places beside the actual cost of labor and materials.

Conclusions

2. For the consumer, the cost of housing is based on the total monthly dollars expended for shelter.

Conclusions

3. For the consumer, each dollar is equal no matter what it pays for. A dollar of insurance equals a dollar of utility equals a dollar of interest equals a dollar of repair equals a dollar of tax, etc.

Conclusions

4. To be effective in reducing actual housing cost, we must think of the obstacles as including all of these costs.

Conclusions

5. Our choice of obstacles to attack should be strategic. If all dollars are equal, we should go after the ones that are technically or politically the easiest. Pick the low fruit.

Lets go back to our example:

(sales price = \$132,000)

Mortgage (30 year at 7.25%) = \$ 812

Ownership costs = \$ 552

Monthly cost to owner = \$ 1364

30% rule (OK here near AMI)

Family Income must = \$54,560

**Suppose we had an
affordability problem**

Family Income is only = \$50,560

Cost/mo. can only be = \$ 1,264

Compared to previous = \$ 1,364

Reduce monthly cost by \$ 100

What are the different ways we might achieve that?

1. Reduce land and land development cost \$16,300



a. Provide free land ready to build

What are the different ways we might achieve that?

2. Reduce construction cost by \$16,300 (hard construction cost by \$12,825)

- a. Eliminate the HVAC & electrical, OR**
- b. Eliminate interior walls and electrical. OR**
- c. Eliminate exterior walls, OR**
- d. Eliminate all finishes, OR**
- c. Eliminate general conditions, overhead, profit, tax, OR**
- d. Reduce the hourly labor rate by 40%, OR**
- e. Invest 1280 hours of sweat equity**

What are the different ways we might achieve that?

- 3. Reduce mortgage interest rate by 1.35%**
- 4. Lower utility cost (e,g,w,t) by 59%**
- 5. Don't set aside replacement reserve**
- 6. Eliminate property tax**
- 7. No maintenance and repairs**
- 8. No telephone or insurance**
- 9. Provide \$16,300 subsidy from other funds.**

**3. So now look at the “whole”
cost of housing that includes:**

- transportation re: services/employment**
- energy/water and infrastructure**

- The transportation cost of housing in relation to services & employment

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- All housing has to be located somewhere.
- Where housing is located has a real impact on transportation costs.
- So while transportation is not an actual cost of housing, there is a relationship between the two.

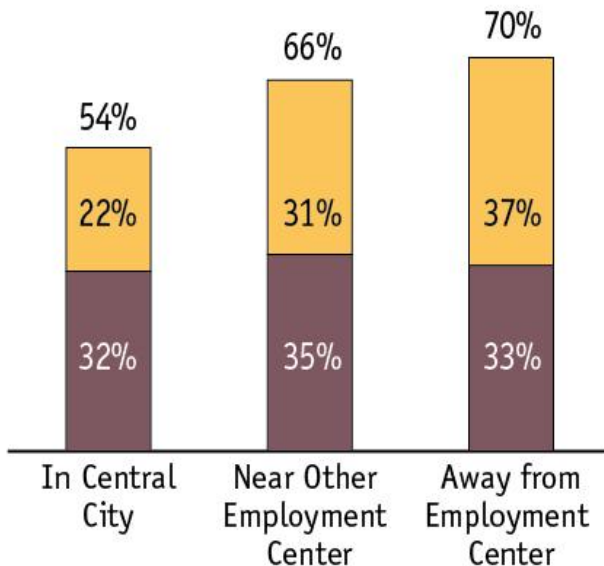


For working families across the nation, transportation varies by location and sometimes exceeds housing costs!

Share of Income Spent on Transportation

Transportation

Households \$20,000 – \$35,000

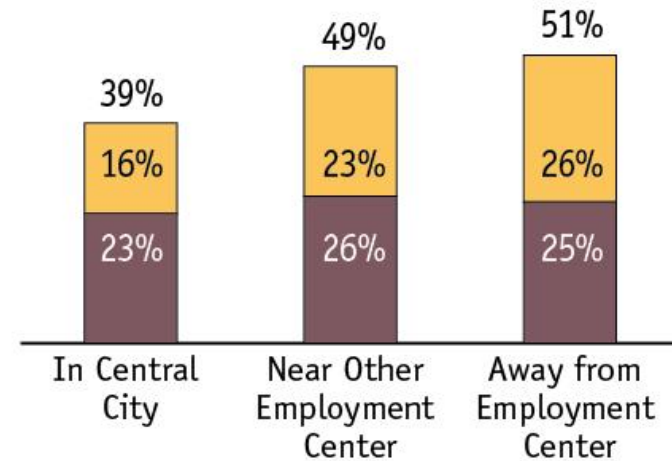


Location of Neighborhood
Where Working Families Live

Share of Income Spent on Housing

Housing

Households \$35,000 – \$50,000



Location of Neighborhood
Where Working Families Live



Source: Center for Neighborhood Technology calculations.

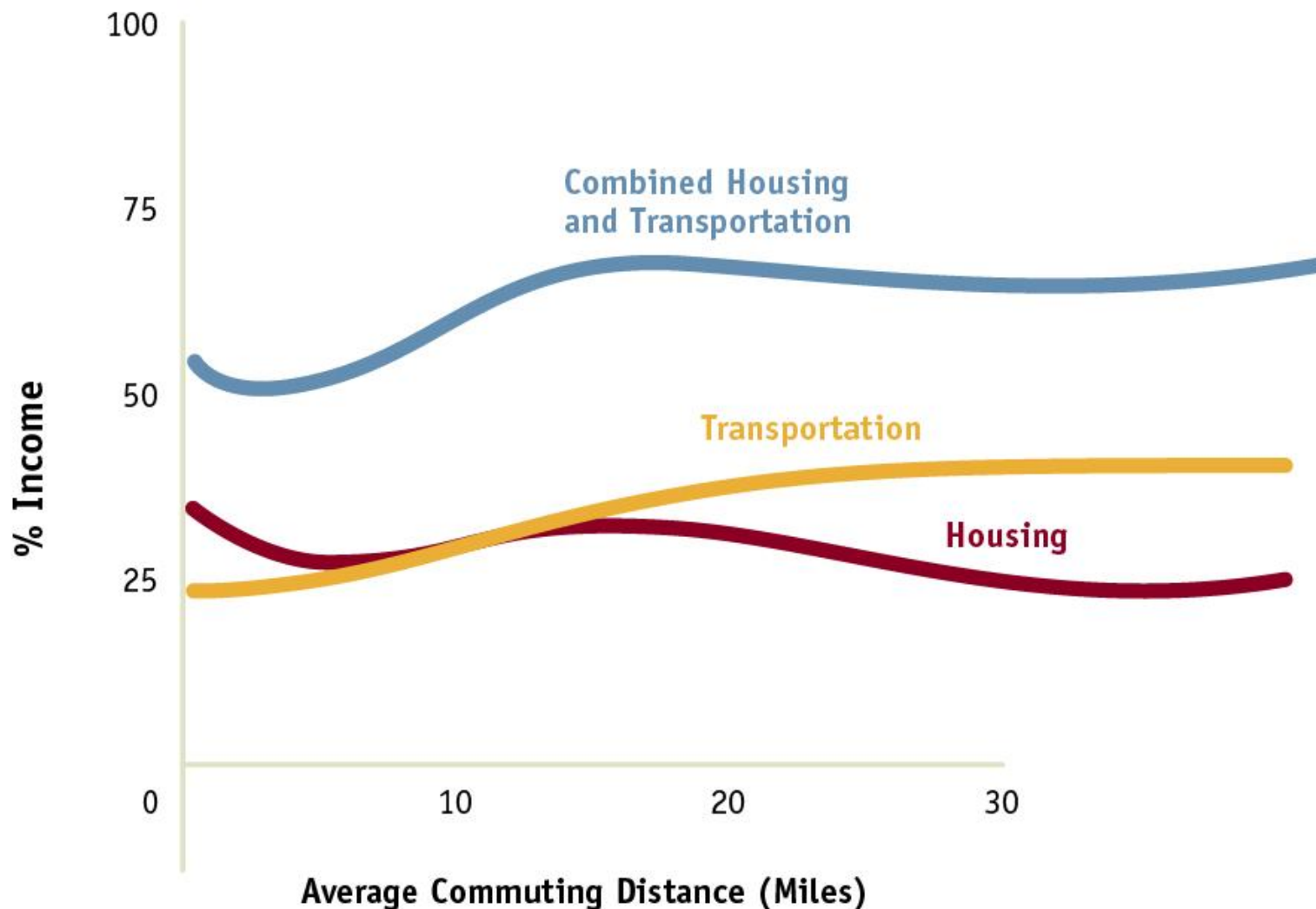
NOTE: Employment centers are job locations with a minimum of 5,000 employees.

Source: Center for Neighborhood Technology calculations.

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So what does this mean?

“Drive ‘til You Qualify”: Transportation costs exceeding housing costs for households earning \$20-\$50,000



Source: Center for Neighborhood Technology calculations.

The Center for Neighborhood Technology in partnership with the Brookings Institution proposes a:

Housing + Transportation Affordability Index

that takes into account the transportation costs associated with a particular housing choice.

What is the Housing + Transportation Affordability Index?

A tool to measure the 2 largest household costs – *housing and transportation* – by neighborhood.

H+T Affordability Index Equation

$$\text{H+T Index} = \frac{(\text{Housing Costs} + \text{Transportation Costs})}{\text{Gross Income}}$$

**The Center for Neighborhood Technology recommends
a H+ T Index < 45% – 48%**

http://htaindex.cnt.org

Housing + Transportation : Center for Neighborhood Technology - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://htaindex.cnt.org/

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Housing + Transportation Affordability Index

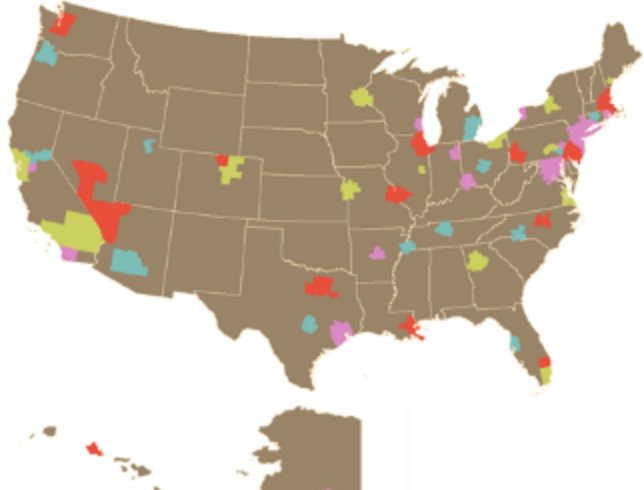
CNT

The Housing + Transportation Affordability Index, developed by CNT and its collaborative partners, the Center for Transit Oriented Development (CTOD), is an innovative tool that measures the true affordability of housing. Planners, lenders, and most consumers traditionally measure housing affordability as 30 percent or less of income. The Housing + Transportation Affordability Index, in contrast, takes into account not just the cost of housing, but also the intrinsic value of place, as quantified through transportation costs. Click [here](#) to explore how this looks in 52 metropolitan areas in the US.

This work is a project of the Brookings Institution's Urban Markets Initiative and is the most comprehensive study-to-date of the Housing + Transportation Affordability Index. The Index completed for the Brookings Institution has been released in two parts. The first phase was released in January 2006 and specifically examines the variables that inform Housing + Transportation costs in St Paul/ Minneapolis, MN. The key to this report is the finding that the three primary dependent variables in the household transportation model are auto ownership, auto use and transit ridership and that the two primary independent variables are residential density and household income. The Brookings Housing + Transportation Affordability Index Phase I paper can be found [here](#). The second phase of the Brookings project models neighborhood-level data for 52 different metropolitan areas with results available through an [interactive mapping website](#). The Index has received much attention from policy makers for its benefits to planners and TOD advocates and has already served as the basis for various other research projects. [For a general description of the methodology used to develop the H+T Index click here.](#)

[Click Here to See Effects of Recent Gas Prices](#)

Region:
- Select a Region -



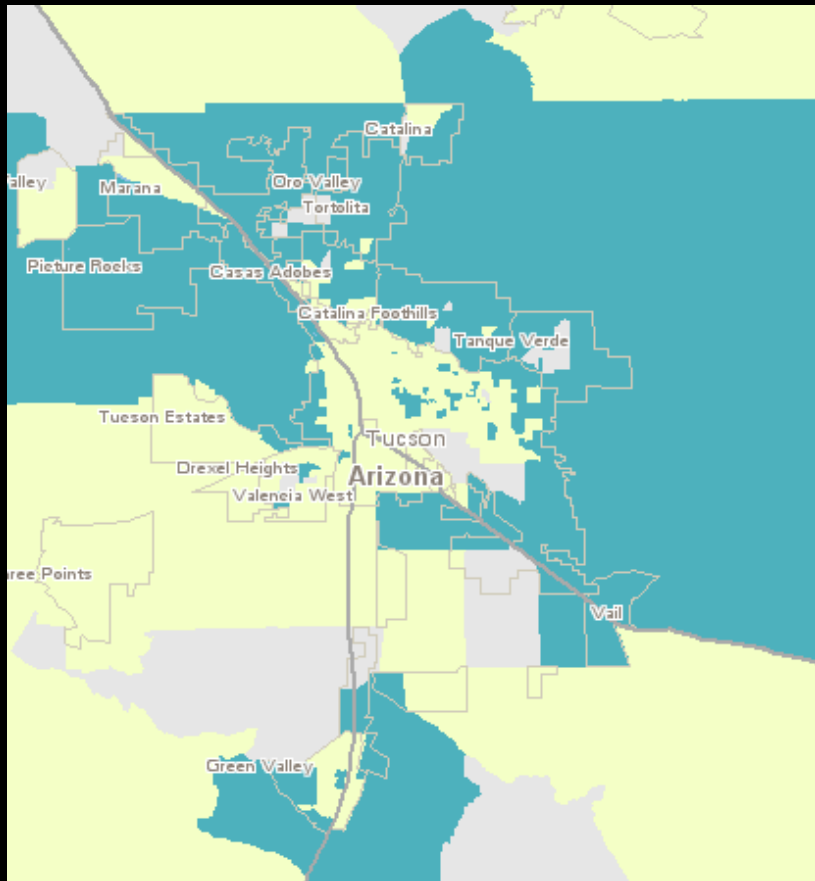
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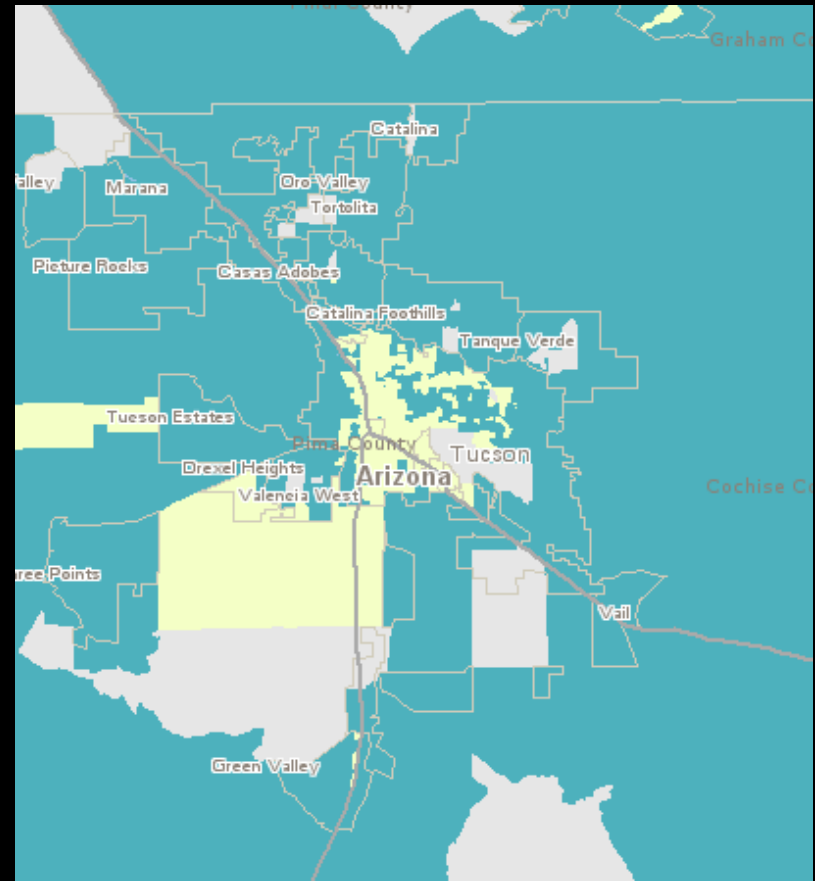
Tucson MSA

Housing Affordability at 30% vs. H + T at 45%

H-Only at 30%

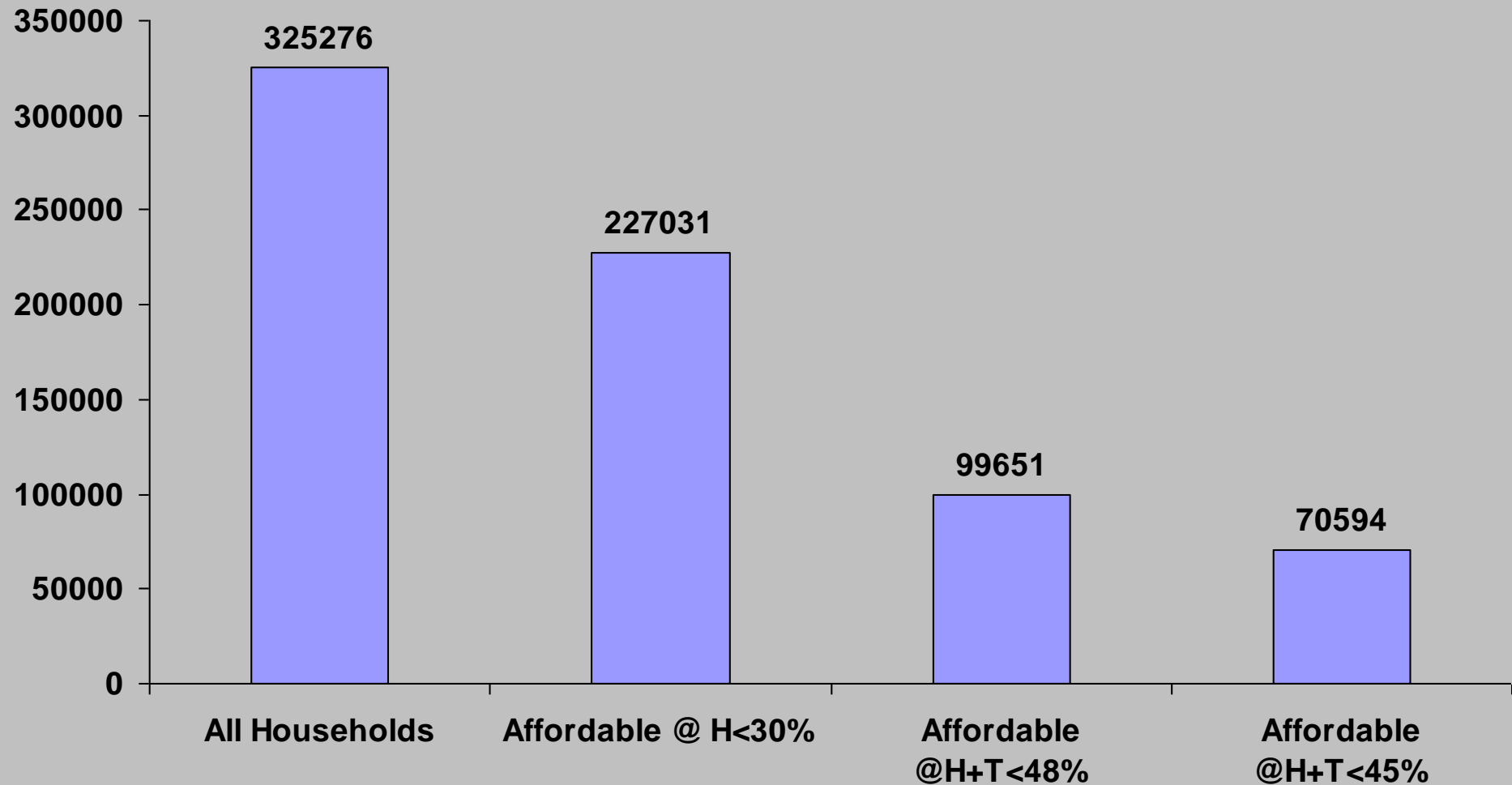


H+T at 45%



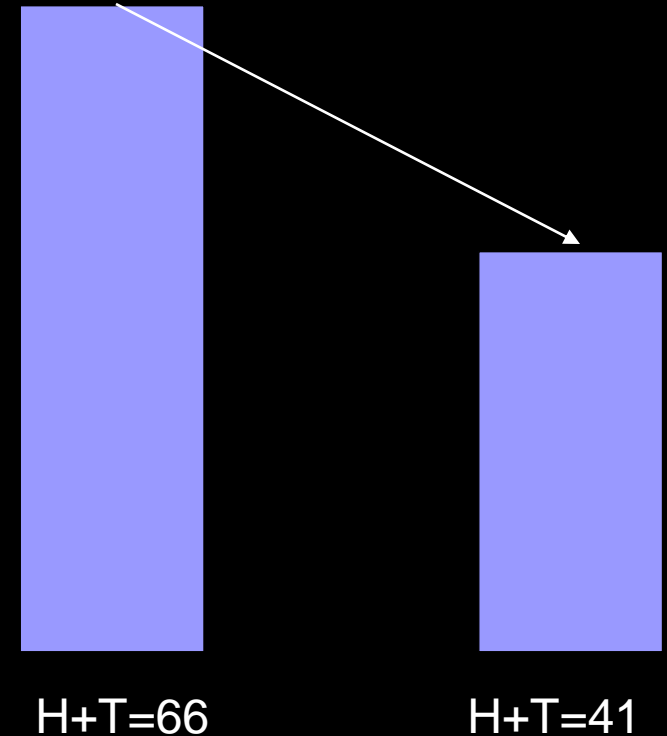
Tucson MSA

Loss of Affordability including Transportation Costs



What it's worth?

- Tucson households (2 cars) spend **\$15,200 on transportation**
\$14,850 on housing
\$30,050, 2/3 of income (H+T = 66%)
- Household with 1 car, 15,000 miles/yr spends **\$8,300 on transportation**, saving **\$6,900** or **15%** of income
- Reduces H+T to 41%
- Increases disposable income 15%
- Region of 500,000 households saves \$3.3 billion per year



LET ME REPEAT!

**On average a median income
family that owns two cars and
drives 25,000 miles per year
pays as much for transportation
as it does for housing!**

Don't believe it?

- Tucson households (2 cars) spend **\$15,200** on transportation
\$14,850 on housing
\$30,050, 2/3 of income (H+T = 66%)

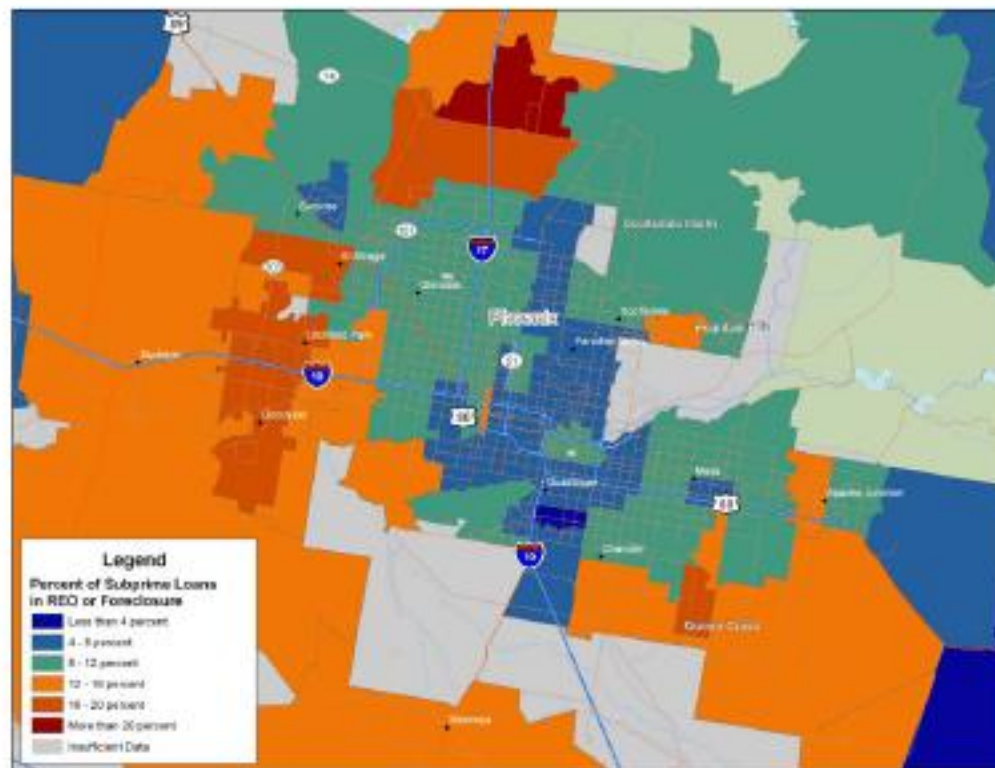
Let's check it using a different calculation?



- A household with 2 cars, **25,000** miles/yr
calculated at the federal mileage
reimbursement rate of **\$0.55/mi** = **\$13,750**

Implications for affordability

Foreclosures Concentrated in Suburban Fringe



Source: Analysis by Federal Reserve Board of Governors, First American LoanPerformance Data, December 2007. Data represent a sample of subprime loans, approximating 70 percent of subprime loan volume. Data aggregated at the zip code level.

Policy Implications

1. The data show that Arizona's affordable housing problem is in large part a location, land use, and transportation problem.

Policy Implications

2. Affordable housing policy should consider the location of that housing in relation to jobs, services, and transportation.

Policy Implications

3. Affordable housing policy needs to be coordinated with our transportation and energy/water policy and vice versa.

Policy Implications

4. Investments in alternate modes can have a positive effect on housing affordability.

Policy Implications

5. The 2008 Arizona Town Hall recommended a H+T Index be adopted by Arizona's communities.

Can we afford the investment in transit?

- A region with 500 thousand Households is spending \$15,000 each for household on transportation
- That is \$7.5 Billion per year
- Over the next 30 years our region will likely spend over on \$500 Billion on private automobile transport

In the 2008 primary, Dennis Kucinich was asked how we can pay for universal healthcare. His answer was *“We are already paying for it, we are just not getting it.”*

**Now let's look briefly at energy
and water costs.**

IF YOU RECALL

**What are the different ways
we might achieve a \$100 reduction in
monthly payment?**

2. Reduce construction cost by \$16,300 (hard construction cost by \$12,825)

- a. Eliminate the HVAC & electrical, OR**
- b. Eliminate interior walls and electrical. OR**
- c. Eliminate exterior walls, OR**
- d. Eliminate all finishes, OR**
- c. Eliminate general conditions, overhead, profit, tax, OR**
- d. Reduce the hourly labor rate by 40%, OR**
- e. Invest 1280 hours of sweat equity**

Ownership (\$132,000 house/month)

• Gas	\$ 45
• Electric	\$ 85
• Telephone (land line, no cell)	\$ 52
• No cable, no internet	\$ 0
• Water	\$ 44
• Insurance	\$ 48
• Taxes	\$ 98
• Replacement reserve	\$100
• <u>Repairs and maintenance</u>	<u>\$ 80</u>
Total Monthly Ownership Cost	\$552

Gas (Heat, cooking a hot water) =	\$ 45.00
Electric (Power and A/C) =	\$ 85.00
<u>Water (potable and irrigation) =</u>	<u>\$ 44.00</u>
Total	\$174.00

**Achieving a 60% reduction in the monthly
expenditure on energy and water is a much
easier task than a \$16,000 reduction in
construction cost**

